

Notice of Allowability

Application No.

10/033,573

Examiner

Vincent P. Barth

Applicant(s)

ROSS, GRAHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment dated 7 Aug. 2003
 2. ☒ The allowed claim(s) is/are 1-23.
 3. ☒ The drawings filed on 07 August 2003 and 02 November 2001 are accepted by the Examiner.
 4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
 5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
 6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**
7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1☒ Notice of References Cited (PTO-892)
- 2☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. 0803-0403
- 4☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5☐ Notice of Informal Patent Application (PTO-152)
- 6☐ Interview Summary (PTO-413), Paper No. _____
- 7☐ Examiner's Amendment/Comment
- 8☒ Examiner's Statement of Reasons for Allowance
- 9☐ Other

DETAILED ACTION

Preliminary Comments

1. Applicant's Amendment dated 7 August 2003 has placed the Application in a condition for allowance as written. The revised Figures 1 and 3 submitted therewith have been accepted, thus the objections to the Drawings are withdrawn. Applicant has properly amended Claims 22 and 23 to avoid the rejections under §112 set forth in the previous Office Action, thus the rejections under said section are withdrawn. Accordingly, the following represents a reasoned statement for allowability.

Allowable Subject Matter

2. Claims 1-23 are allowable, since the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations set forth therein.
3. Referring to Claim 1, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a device for inspecting solder connections between a component and a substrate or between two components or substrates comprises a tip assembly including an image receiving aperture and a light emitting aperture disposed adjacent said image receiving aperture, in combination with the remaining limitations in the claim. Claims 2-15 are allowable based on their dependency upon the claim from which each is dependent. Referring to Claim 16, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a device for inspecting solder connections comprises a tip assembly including an image receiving aperture and a light

emitting aperture disposed adjacent said image receiving aperture, in combination with the remaining limitations in the claim. Claims 17-21 are allowable based on their dependency upon the claim from which each is dependent. Referring to Claim 22, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a method for inspecting solder connections between an IC and a circuit board comprises illuminating the soldered connections through a light emitting aperture disposed upon the tip of the inspection device and visually examining the soldered connections through an image receiving aperture disposed upon the tip of the inspection device, in combination with the remaining limitations in the claim. Claim 23 is allowable based on its dependency upon the claim from which it is dependent.

Comments

4. The following prior art references are of interest, in that each discloses an inspection device with a probe tip which is detachable/removable: Lia, U.S. Pat. No. 4,727,859 (1 Mar. 1988); Tojo, U.S. Pat. No. 4,753,259 (28 Jun., 1988); and Berry, U.S. Pat. No. 4,825,259 (25 Apr. 1989). Applicant's Remarks in the Amendment dated 7 August 2003 highlighted the feature of the instant invention in which the tip of the device is removable, thus allowing for apertures of different diameters, etc., for different applications (Amend. at pg. 9, last para.). The basis of the Examiner's finding that the instant invention contains allowable subject matter is the particular aperture arrangement as claimed, in combination with the remaining features of the invention. However, although the limitation of a removable tip has not been included explicitly in the reasons for allowability (since detachable/removable tips are known), it is worth noting

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that despite this, the combination of the particular aperture configuration into tips which are removable certainly generates an additional benefit that different apertures may be selected for different applications.

5. Note that the reference cited in the previous Office Action, Cannon, PG-Pub No. 2001/0024273 (27 Sept. 2001), has since been issued as a patent grant numbered U.S. 6,580,501 (17 Jun. 2003). Said reference has been included in the Notice of References Cited along with the instant Office Action.

6. Included with the instant Office Action are two Information Disclosure Statements submitted by Applicant, which have been initialed by the Examiner, but which require some discussion. Several of the non-patent literature references do not, strictly speaking, comply with 37 CFR §1.98(b)(5) which may also be found in MPEP §609. According to a strict reading of the 37 CFR §1.98(b)(5) and MPEP §609, the Examiner should not “consider” references which do not comply with those provisions of the Rules. However, PTO form 1449, which is also an Official USPTO form, has a notation on the bottom which states that the Examiner may initial references which have been “considered”, even if not in compliance with MPEP §609.


Generally, the explicit provision of the Code of Federal Regulations would prevail over notations in the margins of a form, albeit an official form. Nevertheless, in the interest of expediency in the prosecution of the instant Application, the Examiner has read and reviewed the non-patent literature submitted, despite the fact that five of the six references do not comply with the Rules. For example, several of the references have dates printed at the margins which clearly originate from an Internet browser, rather than from the original document. Notwithstanding this, the Examiner finds that although the dates of publication, or the places of publication are not

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specified in some of the references (as required by 37 CFR §1.98(b)(5)), none of the subject matter therein would affect the finding of allowability. Note also that pages 6, 178, 179, 292 and 331-335 of the first non-patent literature reference, entitled "Nondestructive Testing Handbook", Second Ed., Vol. 8 were missing in the file reviewed by the Examiner. Accordingly, a line has been drawn through these pages, and Counsel for Applicant should perhaps submit these pages with another IDS before the Application proceeds to issue, or may file an RCE to avoid difficulties concerning the references.

CONCLUSION

7. Applicant's Claims 1-23 are allowed based on the reasons set forth above.
8. Any inquiries concerning this communication from the Examiner should be directed to Vincent P. Barth, whose telephone number is 703-605-0750, and who may be ordinarily reached from 9:00 a.m. to 5:30 p.m., Monday through Friday. The official fax number for communications to the group is 703-872-9306. Note that this fax number is new, and replaces the numbers provided in previous communications from the group.
9. If attempts to reach the Examiner prove unsuccessful, the Examiner's supervisor is Frank G. Font, who may be reached at 703-308-4881.
10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Richard A. Rosenberger
Primary Examiner